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ABSTRACT

This report was prepared to explain home equity conversion (HEC), a means whereby elderly persons can convert the wealth represented by homeownership into a flow of income. It focuses exclusively on arrangements that convert residential equity into discretionary cash. The introduction reviews the recent history of HEC in the United States. A section on types of reverse mortgages explains that all reverse mortgages are rising-debt loans, and that types of reverse mortgages differ primarily in how interest is calculated or charged, how the term is determined, and how disbursements are established. Various types of reverse mortgages are described and discussed. Different characteristics of reverse mortgages and sale leasebacks are analyzed in terms of their effects on homeowner income and rate of return to the lender. The next section examines the technical specifications of various HEC instruments. Descriptions of instruments are sufficiently detailed to enable lenders to understand how payments, the loan balance, the terms to maturity, and other loan parameters of reverse mortgages interact, and how different combinations of the variables affect the rate of return to the lender. Lender and borrower risks associated with reverse mortgages are discussed, as are lender and borrower benefits. The final section considers the future of reverse mortgage lending. (NB)

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Home Equity Conversion for the Elderly

An Analysis for Lenders

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Home Equity Conversion for the Elderly

An Analysis for Lenders

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Consumer Affairs • Program Department
American Association of Retired Persons

AARP

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Foreword

The American Association of Retired Persons (AARP) has, for several years, supported the concept of home equity conversion as a viable option for older homeowners who wish to remain in their homes and supplement their income. Experience indicates that the homeowner most likely to take advantage of this option is age 70 or older, female, single, and living on a limited income, with few other assets. The potential benefits to these homeowners are substantial. Besides enabling homeowners to remain in familiar surroundings, home equity conversion can provide resources for discretionary use in undertaking home repairs and in financing in-home health care or other services. The risks for the homeowner relate to possible lender default, inflation eroding the purchasing power of their cash resource, outliving the term of the loan in some plans, and foregoing the appreciation in their homes in others. AARP is very concerned that proper consumer safeguards are in place to protect older homeowners from unknowingly losing their largest single asset in these transactions.

One of the biggest stumbling blocks in the development of home equity conversion mechanisms is the dearth of available products. At this time, there are only a handful of available plans in scattered communities across the country. Another significant problem is finding professional advisors who are familiar enough with the concept of home equity conversion to be able to assist their older clients in making the right decision.

In response to these problems, AARP's Consumer Affairs Section has prepared manuals on home equity conversion for attorneys, bankers, and financial advisors. The manuals are designed to provide basic information on home equity conversion, highlighting some of the critical issues that should be understood and addressed in advising an older client. AARP has sought the assistance of persons with expertise in each particular field-banking, law and financial planning-to write each manual respectively. The information is presented objectively and does not necessarily represent the Association's policies. All of the manuals are available, at no charge, from:

American Association of Retired Persons
Consumer Affairs Section
1909 K Street, N.W.
Washington, DC 20049

An Introduction to Home Equity Conversion

Background and Overview

Home equity conversion is a means whereby elderly persons can convert the wealth represented by homeownership into a flow of income. Because the share of their wealth represented by residential equity is in most cases very large, converting this asset to income can often significantly improve the well-being of elderly homeowners.

Most noninstitutionalized elderly Americans live in and own their homes. The U.S. Bureau of the Census reported that in 1981, 95 percent of Americans over age 65 lived in households, and 84 percent of those lived alone or with their spouses. (For those over age 75 the comparable figures are slightly smaller: 90 percent lived in households, and 79 percent lived alone or with their spouses.)

Homeownership among the elderly varies with age and family status. Various figures are cited, but it seems clear that at least 70 percent of Americans aged 65 and over live in owner-occupied housing. For example, the Survey of Consumer Finances for 1983 as published reported a 70 percent homeownership rate for those age 65 and over in nonfarm residences.[1] A survey of new beneficiaries of social security conducted in 1982 reported homeownership data for newly retired workers age 65 or over: 89 percent of married men and their wives were homeowners, as were 85 percent of married women and their husbands, and just over 50 percent of the unmarried retirees. The weighted average homeownership rate for all new retirees was 77 percent.

Moreover, elderly homeowners frequently own their homes without mortgage debt. The previously cited Survey of Consumer Finances reveals that only 20 percent of homeowner family units with a head between age 65 and 74 had mortgage debt.[2] The numbers for the oldest homeowners are even more extreme. Only five percent of homeowners with heads of household 75 and over had outstanding mortgage debt.

Where mortgages exist, the size of the mortgage debt on homes owned by the elderly is typically small. In 1981, for the U.S. as a whole, 56 percent of elderly homeowners with mortgages owed less than 20 percent of their home's property value.[3]

Thus the aggregate amount of home equity held by the nation's elderly is huge. Estimates range from $600 billion to $800 billion, but the actual amount is less important than the fact that this represents the major asset of America's elderly population, and the only significant potential private source of income for most elderly individuals.

Home equity conversion (HEC) can take place in a variety of ways. Some types of HEC are solely or primarily dedicated to converting equity into discretionary cash, while others are not. For example, in public sector programs offering property tax deferral or deferred-payment home improvement loans, funds advanced must be used for a specific purpose.

This manual focuses exclusively on arrangements that convert residential equity into discretionary cash. Of these plans, the ones that have received the most attention are sale leaseback transactions and rising-debt loans, or reverse mortgages. Both of these generate an income that is based on the home equity of the elderly homeowner. Still other types of HEC, such as line-of-credit arrangements, do not result in income flow.

The reverse mortgage is a type of equity conversion that occurs gradually through the accumulation of a loan balance. Most reverse mortgages generate a monthly disbursement of funds that contributes to a rising loan balance constituting principal disbursements and accrued interest. The monthly disbursement is calculated so that the loan balance reaches a target amount at a specific time in the future. Depending on the type of reverse mortgage, the timing might or might not be related to the age of the borrower. The size of the target balance is typically a percentage of the property value at loan origination.

Reverse mortgages can be originated and held by a variety of financial institutions, including banks and other depository institutions. Reverse mortgages need not be originated, serviced, and funded by the same institution, but to date that has been the pattern for virtually all transactions. This is due in large part to the relatively small dollar volume and small number of HEC transactions that have been consummated by any single institution.

Sale leasebacks, unlike reverse mortgages, entail a change of ownership. The property is sold to an investor and a leaseback (i.e, a rental) agreement is entered into between the seller and buyer. Thus, a sale leaseback involves a shift of the burdens and responsibilities of ownership. Although sale leaseback plans vary as to the specific use of the proceeds from the property sale, all sale leasebacks 1) use the proceeds to generate a flow of income to the seller and 2) ensure the right of the seller to continue to live in the home.

Reverse mortgage lending and sale leasebacks are new, formalized ways of effecting home equity conversion. Informal home equity conversion has taken place for a long time within families and between friends, sometimes using carefully drafted documents, but more often reflecting casual support arrangements between children and parents. Since offspring normally inherit the family home, monthly checks from children to their elderly parents can be thought of as payments for the home equity the children will receive later. Formal HEC programs, however, are recent innovations.[4]

The Recent History of Home Equity Conversion in the U.S.

Most formal home equity conversion programs have come into existence since 1980. There are a few reverse mortgage and sale leaseback programs that have received a fair amount of public attention.

The first formal sale leaseback program to attract attention was the Fouratt Senior Equity Plan, which began offering sale leasebacks in 1979. The plan was developed by the Fouratt Corp. and is designed to be marketed by real estate agents using the Fouratt documents. This plan has been discussed frequently in publications on home equity conversion and has been the focus of considerable attention with respect to federal income tax issues. However, it seems not to have been marketed very widely or aggressively, and few transactions have been reported.

Reverse mortgages were offered off and on by depository institutions in the 1960s and 1970s, but were ordinarily marketed on a limited basis or provided to individuals known by local lenders. In 1980 the San Francisco Development Fund (SFDF) began a Reverse Annuity Mortgage (RAM) program, which included the offering of both sale leasebacks and reverse mortgages. Both home equity conversion instruments of the RAM program are offered in the context of a broad-based counseling program. Most of the HEC activity of the RAM program has been with reverse mortgages. The program's reverse mortgage is a term instrument with a fixed interest rate.

The counseling component of the RAM program is provided by a nonprofit group (such as the SFDF itself) or by a government agency. The funding for the reverse mortgages comes from banks or savings and loan associations. The counselor helps the homeowner reach a decision about home equity conversion, as well as such related matters as obtaining public benefits for which the homeowner is qualified. If the homeowner chooses to take out a reverse mortgage, the counselor helps prepare a loan application, which is submitted to the lender for evaluation. Since its inception, the RAM program in San Francisco and its expansion sites elsewhere in California have originated approximately 200 loans. Expansion sites outside California have originated another 50 or so loans.

The American Homestead Mortgage Company (AHMC) offers a reverse mortgage that is quite different from that of the RAM program. AHMC's Individual Reverse Mortgage Account or IRMA, is a shared-appreciation reverse mortgage which guarantees monthly payments for as long as the homeowner retains the home as a principal residence. IRMA, originally called the Century Plan, was publicized in 1983 and applications were first accepted in early 1984. By August 1986, approximately 600 transactions had been completed. For one year, Prudential-Bache Mortgage Securities Co. marketed IRMA. Although this marketing agreement is no longer in effect, AHMC is still offering the plan and there has been some discussion of marketing it through depository or other financial institutions. Under this arrangement, AHMC would continue to service and fund the loans, but the initial and primary contact with the homeowner would be through another financial institution, such as a bank.

As of April 1986, IRMA was available in New Jersey, Pennsylvania, Connecticut, Maryland, and Ohio. The company plans to expand its operations into New York and other states in the near future.

The HEC programs we have described are all essentially private sector programs. Even the RAM programs, which might be considered quasi-governmental, offer home equity conversion via unsubsidized financial instruments. Indeed, one of the purposes of the initial demonstration program of the San Francisco Development Fund was to show that home equity conversion could be done profitably by private lenders. The reverse mortgages (and the sale leasebacks) offered by the RAM program are privately funded, and once the transaction is closed the counseling organization plays no further role in the operation of the loan or sale.

There are also two public HEC programs in operation: the HELP programs and a program of the Connecticut Housing Finance Authority.

The Home Equity Living Plan (HELP) of Buffalo, N.Y., has been in operation since 1981, and between 1981 and 1984 completed approximately 65 transactions. The HELP model has been replicated by the Arkansas Development Finance Authority and the Arkansas Office on Aging for older homeowners in the Little Rock area.

The HELP transaction involves a "split equity" arrangement. The agency purchases a remainder interest in the home in exchange for either cash or a life annuity; it takes over home maintenance expenditures, and taxes and insurance; performs rehabilitation work at the time the transaction is closed; and provides a life estate for the seller.

No explicit rent is paid by the seller after the transaction is closed. If the seller has elected an annuity method of settlement, the annuity payments continue for life regardless of continued residency in the home. If, for example, the seller were to later move into a nursing home, the payments would continue even though the agency would sell the house. On the other hand, HELP annuities do not include a death benefit or guaranteed payment period.

The Connecticut Housing Finance Authority (CHFA) instituted a reverse mortgage program in 1985. Rather than involving private lenders, the funding for the loans comes from CHFA reserves. The loan term is ten years, and the interest charged is a below-market fixed rate.[5] The monthly reverse mortgage payments to the borrower increase by three percent each year. The number of loans made in a given round of the program is limited by the amount of funds set aside. By the end of July in 1986, CHFA had closed 96 transactions.

The existing HEC programs and plans have various underlying goals. Even among programs with an explicit business purpose, some are operated for profit alone, while others attempt to combine profit making with the promotion of other lines of business. And even among HEC programs motivated by a public purpose, the goals range from simple income supplementation for the elderly (best exemplified by the CHFA program) to a combination of neighborhood stabilization, income supplementation, and provision of special targeted services to the elderly. Regardless of the motivation, home equity conversion clearly serves many purposes simultaneously. This is true from the lender's perspective as well as the consumer's.

Types of Reverse Mortgages

All of the reverse mortgages currently being offered are in the form of a rising-debt loan. The important differences across instruments relate to how interest is calculated or charged, how the term is determined, and how disbursements are established. In this section various types of reverse mortgages are described and discussed. In the following section, the different characteristics of reverse mortgages and sale leasebacks are analyzed in terms of their effects on homeowner income and rate of return to the lender.

A reverse mortgage is rising-debt loan. This means that the loan begins with no principal balance due and the balance gradually rises over the life of the loan. The first charges to the loan would include any closing costs being financed and any initial disbursement. Reverse mortgages are designed for elderly homeowners who are in need of income. Since many of them desperately need funds by the time they apply for a loan, it is common for a homeowner to be granted an initial disbursement of a lump sum to repay existing debts (including outstanding liens on the home) or to pay for specific goods or services (commonly including needed repairs on the home or medical services). After this initial disbursement, however, most reverse mortgages have scheduled disbursements for the term of the loan.

The Reverse Annuity Mortgage

The first type of reverse mortgage to be discussed widely was a Reverse Annuity Mortgage, or RAM. The RAM was intended to be a two-way transaction. The homeowner would take out a mortgage loan on the home, the proceeds of which would be used to purchase an immediate annuity. The annuity would generate a flow of income, a portion of which would be used to pay interest and principal on the mortgage. Because the annuity payments would be based on life expectancy as well as on interest earned on the annuity premium, they were expected to substantially exceed the monthly mortgage payments, leaving a handsome difference as income to the homeowner.

This scenario might have worked if an annuity (insurance) company had agreed to write both portions of the RAM (the annuity and the mortgage), but U.S. insurance companies have not, up to this point, done so. Consequently, after taking into account both the retail loading fees on annuities and the closing costs of the mortgages, the income remaining for the homeowner was insufficient to make a RAM worthwhile. A RAM would only be attractive for a very old homeowner, but most insurers do not write annuities for persons over age 85.

Life insurance companies may yet become interested in offering RAMs, perhaps on a wholesale basis using banks as retail agents for loan origination and servicing. Such a consolidation of the two financial functions would increase annuity income. But, despite its feasibility, no such arrangement is available to date.

The Term Reverse Mortgage

Unlike a reverse annuity mortgage, a term reverse mortgage has a fixed term to maturity. At a scheduled date the loan is due and payable. This leaves the interest rate and the payment or annuity to be determined.

The interest rate on a term loan can be fixed or adjustable. However, the case for a fixed-rate reverse mortgage is weaker than that for a forward mortgage because disbursements on a reverse mortgage are made over an extended period in the future. This type of loan could be funded up front by the acquisition of an amount of money sufficient (with interest) to generate the monthly payments to the homeowner over the expected life of the loan. But, loans are not normally funded this way. Rather, lenders fund the disbursements through the acquisition of funds as disbursements come due. Thus, the term reverse mortgage obligates the lender to make a series of loans (tied together to avoid intervening lienors) in the future. Since the funds will be disbursed in the future, lenders may shy away from charging a fixed interest rate prevailing at the time of the loan origination.

An adjustable-rate term reverse mortgage could involve a single rate for the existing loan balance, periodically adjusted, or a new rate each time a disbursement is made. The latter would, in effect, be a series of fixed-rate loans, but imagine the challenge of explaining to a potential borrower a loan with as many as one hundred interest rates. It is far more practical to view the disbursements as a series of adjustable-rate loans. Thus a single periodically adjusted rate is used to calculate interest on the full loan balance.

The type of index to be used with an adjustable-rate reverse mortgage does not present much of a problem. As with any adjustable-rate mortgage, it is appropriate to use the interest rate index applied to securities having a maturity approximately equal to the adjustment period. If, for example, rates were to be adjusted annually, a suitable index would be a one-year government security rate.

One existing HEC plan (IRMA) uses a variable interest rate, but not with a true term reverse mortgage. Because it is a shared-appreciation plan, the interest charged on the loan is a combination of fixed interest (at a fixed rate) and "contingent interest" in the form of shared property appreciation. Although nothing precludes a term reverse mortgage from being combined with shared-appreciation, such an instrument has not yet been offered.

Like the interest rate, the monthly payments on a term reverse mortgage can either be fixed or adjustable. Fixed payments can be level or graduated.

In the RAM program, fixed-payment reverse mortgages are offered with either level or graduated payments. The graduated payments rise at six percent annually. Because the reverse mortgage is a term instrument, payments can be calculated to reach the same loan balance at maturity whether they are level or graduated, assuming a fixed interest rate or given some variable interest rate scenario.[6]

A term reverse mortgage with adjustable payments may relate payments either to an adjustable interest rate or to some other variable. If the interest rate is fixed, the disbursements might be linked to the Consumer Price Index or to changes in social security benefits. On the other hand, interest rates may be adjustable while payments are fixed. An adjustable-rate reverse mortgage with a fixed disbursement would capture the effect of note changes in the course of the future loan balance.

Thus, a term reverse mortgage can have any combination of fixed or adjustable payments and fixed or adjustable interest rates. Decisions concerning the type of payment schedule and interest rate adjustability should be based on marketing and risk management grounds. Of course, the loan balance at maturity will be affected if either the interest rate or the payments are adjustable. The potential magnitude of change can be determined by simulation as will be shown later.

A Line of Credit

Lines of credit based on home equity are already commonly extended to homeowners. Thus a line of credit geared specifically to elderly homeowners would clearly be possible, and could be either a term instrument or not. It would differ fundamentally from a reverse mortgage (term or annuity term) because the line of credit would not automatically generate a flow of income. There would be no inherent schedule of disbursements.

A line of credit would offer the elderly homeowner considerably more flexibility than a reverse mortgage, but it would also entail more uncertainty for the lender. The major uncertainty would be the time of the loan takedown. Once the line of credit was activated, the repayment schedule (or, alternatively, the maturity date) would also be activated. There could be a set term by which full repayment was due, or a repayment schedule could ensure that full repayment would occur by a specific date, or the repayment schedule could limit the future course of the loan balance. Thus a line of credit could be either a term or non-term instrument.

Reverse Mortgages Related to Residency

The alternative to a term HEC instrument is one that either guarantees the homeowner an income flow or requires no repayment for a period up to life.[7] The distinction between the income flow and the repayment requirement is critical in the classification of an instrument.

One variant of the previously discussed HELP plan provides an income flow for life even if the elderly person ceases to reside in the home that is the basis for the transaction. This would also be the case with a reverse annuity mortgage and with some sale leasebacks.[8] Alternatively, an instrument might guarantee life tenancy but not life income. A reverse mortgage could defer repayment until the home is no longer a principal residence, but limit disbursements to a fixed term. Or a reverse mortgage could defer repayment *and* guarantee disbursements for as long as the borrower retains the home as a principal residence.

In order to guarantee a homeowner an income for life, there must be a life annuity. In fact, the life guarantee of income *is* a life annuity. When HELP promises to pay disbursements for life, it is giving a life annuity. The life annuity need not be purchased from an annuity (insurance) company.

Tying the deferral of repayment and continuation of income to tenure in the home is, in some ways, simpler and, in others, more complicated than a life annuity. Tying income to tenure in the home ties the lender's disbursement obligation to factors that affect the term of residency. Life expectancy is one of those factors, but other factors such as the homeowner's health and his or her interest in remaining in the home come into play.

An existing program offering a reverse mortgage that defers repayment and guarantees an income flow for as long as the home remains a principal residence is IRMA. It relies on property appreciation to help offset the risk of a lengthy period of residency. Because this may not be an obvious connection, it bears some discussion.

The risk to a lender of deferring repayment and continuing disbursement is classified as default risk. The default risk is that at the point of loan maturity (the point at which the loan is due or is called off) the property value may be below the loan balance.[9] If the loan balance exceeds the property value, the lender suffers a loss. For lack of a better term, we will call this a default loss.

Because reverse mortgages are rising-debt loans, default loss is exceedingly unlikely in the early years of the loan. Naturally, the greater the value of disbursements (relative to property value) and the higher the interest rate, the faster the growth of the loan balance. But, for any given set of loan parameters, default loss in the early life of the loan is unlikely. The longer the actual maturity of a loan, the greater the default risk. Viewed from the perspective of loan origination, the longer the actual term of the loan, the greater will be the loan balance, and the greater the uncertainty of property value.

A lender wishing to reduce the likelihood of loss on a portfolio of loans that guarantee disbursements for as long as the home remains a principal residence has a limited number of options. One option is to ensure that loans that pay off early automatically generate more income than loans that pay off later. This can be accomplished simply by charging a higher interest rate in the early years of the loan than in later years. A second option is to build in a risk factor in order that some long-term loans will have higher-than-expected returns so as to offset others that produce lower-than-expected returns (those on which the loan balance exceeds property value). The more evenly the default risks can be covered by some type of positive return, the less likely that a lender will experience a loss on a portfolio of loans.

The following options would make reverse mortgages guaranteed for the term of tenure in the home more attractive to lenders: a schedule of decreasing interest rates; mortgage insurance (social or private or self-insured) and shared-appreciation or shared-equity instruments. In all cases, however, a pool of loans is required to dilute the risk to the lender.

Analysis of HEC Instruments

In this section we will examine the technical specifications of various HEC instruments. We will describe the instruments in sufficient detail to enable lenders to understand how payments, the loan balance, the term to maturity, and other loan parameters of reverse mortgages interact, and how different combinations of the variables affect the rate of return to the lender. Reverse mortgages are discussed first, followed by a brief look at sale leasebacks.

Reverse Mortgages

Reverse mortgages were described previously as rising-debt loans. Regular disbursements are made to the homeowner and a loan balance is accumulated as a result of the disbursements and interest charges. Since disbursements are usually made monthly, that will be the assumption in the examples we present. First we will look at the primary question of how disbursements are determined. Naturally, the answer to this differs for term and non-term reverse mortgages.

Determination of Disbursements

The disbursements on a term reverse mortgage are set so as to reach a target loan balance at maturity. In order to calculate the loan balance at any point in time, the only information required is the interest rate and the amount of disbursement (plus any initial disbursement apart from the regular disbursement). Conversely, if one knows the interest rate and what one would like the loan balance to be at a point in time, the determination of disbursements is a simple financial calculation. Thus, to determine disbursements, one needs to know the target loan balance and the interest rate.

The target loan balance for a term reverse mortgage is the loan balance at maturity. Assuming that the lender expects the loan to be paid off no later than the scheduled maturity of the loan, the target loan balance will be tied to property value.[10] As with most loans, the maximum loan balance should be a fraction of the collateral. The relevant loan-to-value ratio (LTV) on a reverse mortgage is the ratio of the loan balance at loan maturity to property value at loan origination. The property value at origination is used because it is a known value. (Of course, this also has the effect of making any given LTV conservative, since most properties appreciate over time.)

For example, if the current property value is $75,000 and the target LTV is 80 percent, the assumed target loan balance is $60,000.[11] For any given property, the monthly disbursement (or maximum monthly disbursement) is a function of term and interest rate. If the loan term is seven years and the interest rate is 10 percent, the disbursement is simply that amount which, if put out in 84 (7x12) monthly installments, will accumulate to $60,000. Assuming disbursements are made at the beginning of each month, the monthly payment for a level reverse mortgage would be $491.97. If the disbursements rise over the loan term at six percent per year, then the monthly disbursement during the first year would be $419.87.

Determining disbursements for a non-term reverse mortgage is fundamentally different than for a term reverse mortgage. Any non-term reverse mortgage is a risky proposition because of the open-ended occupancy.[12] In the absence of a time cap on the loan, the concept of a target loan balance loses its meaning, as does the target LTV.

With a non-term reverse mortgage, because of the uncertain and unconstrained nature of the loan, the maximum loan balance actually reached for any single loan is determined by various contingent events, including death, serious illness, and the decision to sell, among others.[13] Even these events, however, are to some degree predictable and subject to offsetting risk in a large pool. That is, it might be difficult to predict when a particular reverse mortgage borrower would move out of the home, but a large number of borrowers will have a predictable *distribution* of outcomes.

A second element of uncertainty with a non-term reverse mortgage is future property value. Since there is no cap on the term, the potential effect to the lender of a low- or non-appreciating property is more serious.

The effects of different variables on the size of the payments to the homeowner and the influence of the uncertain factors on the rate of return to the lender are shown in the following example. In order to appreciate the importance of different variables, it is appropriate to conduct simulations. In this way, the value or size of key variables can be adjusted and the response or sensitivity of payment size or rate of return to the lender can be monitored. We shall look first at how lenders determine the size of payments to the homeowner in the case of term loans.

Simulations: Terms Loans

Determining the monthly disbursement for a term reverse mortgage is a simple annuity-type calculation. What amount, if disbursed monthly for x months, with interest accumulated and compounded at rate i, will reach target loan balance B? We will assume that the reverse mortgage disbursements are made at the beginning of each month, and repayment occurs at the end of the last month.

In Table 1, monthly disbursements for a range of examples are displayed. In this and subsequent tables the disbursements shown are for $10,000 of target loan balance. For a $60,000 target loan balance, the disbursement shown in the table would be multiplied by six. For example, the disbursement for the seven year, ten percent, $60,000 loan mentioned above, is approximately $492 (6 x $82). We can see that disbursements are quite sensitive to term to maturity and are more sensitive the lower the interest rate.

Table 1

The Effect of Interest Rate and Term on Monthly Disbursements of a Term Reverse Mortgage (Disbursements per $10,000 of Target Loan Balance)

Annual Interest Rate	Term in Years 5	7	9	11	13
8%	$135.20	$88.60	$63.10	$47.17	$36.40
10	128.07	82.00	56.98	41.52	31.19
12	121.23	75.77	51.33	36.42	26.60
14	114.68	69.92	46.13	31.83	22.58
16	108.40	64.43	41.37	27.73	19.08

As the scheduled term increases, the period of time over which interest accumulates increases. This is a familiar concept to any homeowner paying off a long-term regular (i.e., forward) mortgage: the early monthly payments are largely interest. With a reverse mortgage, the relationship between payment and interest can be summarized as follows: the longer the term, the smaller the disbursements to the homeowner and the smaller the percentage they will represent of the final loan balance. Table 2 emphasizes the latter relationship. It displays the fraction of final loan balance that comes from principal disbursements. High interest rates and long maturities significantly reduce disbursements. Some of the data from Table 2 are displayed in Figure 1.

Figure 1

DISBURSEMENTS AS PERCENTAGE OF FINAL LOAN BALANCE

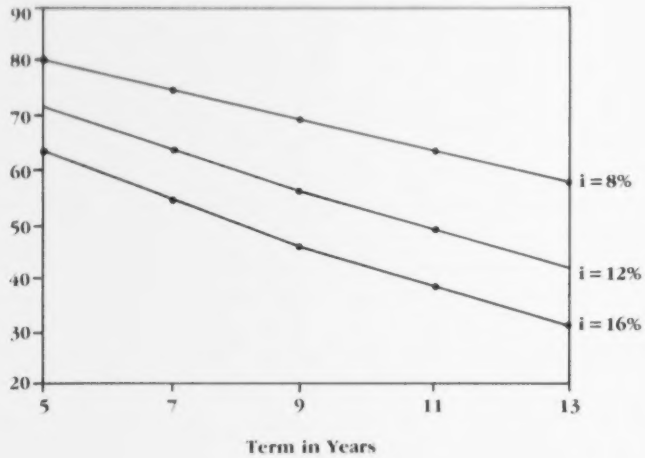


Table 2

Principal Disbursements as a Percentage of Final Loan Balance (Disbursements per $10,000 of Target Loan Balance)

Annual Interest Rate	Term in Years 5	7	9	11	13
8%	81.1%	74.4%	68.1%	62.3%	56.8%
10	76.8	68.9	61.5	54.8	48.7
12	72.7	63.6	55.4	48.1	41.5
14	68.8	58.7	49.8	42.0	35.2
16	65.0	54.1	44.7	36.6	29.8

Although emphasis in Table 2 and Figure 1 is on the loan balance at maturity, we already noted that most term reverse mortgages will be prepaid, that is, they will be paid off before the scheduled target maturity. Thus the actual ratio of total principal disbursements to loan balance will depend on when the loan is paid back. If a reverse mortgage were repaid in the first month, the accumulated interest would be next to nothing and the principal disbursements would be virtually the entire loan balance.

Table 2 can also be used to calculate the ratio between principal and interest for a prepaid loan. Any 12 percent reverse mortgage, whether it is scheduled to have a five-year term or a 50-year term, will have the same ratio of principal to loan balance at the end of the fifth year: 72.7 percent. To gauge the effect of early payoff on the fraction of the loan that has been disbursed, simply read across any row of Table 2. A 13-year loan at 12 percent which is prepaid at the end of the seventh year will have a ratio of 63.6 percent, whereas if it goes to term it will have a ratio of 41.5 percent.

In the type of term reverse mortgage shown in tables 1 and 2, the rate of return to the lender will be the same as the interest rate charged on the loan provided the payoff occurs no later than scheduled maturity. However, this ignores any front-end charges, or at least assumes that they are simply a recovery of expenses.

If front-end charges or fees exceed expenses, they are in fact a form of prepaid interest, and the Rate Of Return (ROR) to the lender will depend on the actual payoff date. The reason for this is simply that loan fees are assessed as a fraction of the loan balance. With a term reverse mortgage, fees are calculated using the target final loan balance. The size of the loan fee does not depend on the *actual* term of the loan. If the fee is prepaid interest above expenses, a short actual term (relative to scheduled term) will mean a higher return to the lender. Once again, this is most easily seen with a simulation.

Table 3 shows how loan fees affect the lender's ROR in the event of early payoff. It is assumed that the loan fee is added to the loan balance at loan origination, and that this does not affect the monthly disbursement to the borrower. (Consequently, the final loan balance would be a little larger than if there had been no loan fee or if it had been paid in cash.) It is clear from this table that early payoffs produce high rates of return to the lender.[14]

Table 3

The Effects of Early Payoff on Rate of Return (ROR) for a Term Reverse Mortgage When Loan Fees Are Charged (Interest Rate = 12 percent; Scheduled Term = 9 years)

Actual Term Years	Loan Fee as Percentage of Target Loan Balance			
	0%	1%	2%	3%
1	12.0%	40.7%	65.1%	97.8%
2	12.0	20.0	27.3	37.7
3	12.0	15.8	19.4	24.6
4	12.0	14.3	16.4	19.6
5	12.0	13.5	15.0	17.1
6	12.0	13.1	14.1	15.7
7	12.0	12.8	13.6	14.9
8	12.0	12.7	13.3	14.3
9	12.0	12.6	13.1	13.9

Note: The loan fee is assumed to be in excess of actual costs to the lender.

Loan fees on reverse mortgages are often treated as additional disbursements that occur at the point of loan origination (which is also when the first regular disbursement is made). As mentioned previously, reverse mortgages often include a sizable initial disbursement to provide the homeowner with needed funds. Such initial disbursements may be to pay off an existing mortgage loan, clear liens against the property, make home repairs, or make a purchase unrelated to the home. Since the target loan balance is fixed, any initial disbursement would reduce the monthly disbursement. The magnitude of the effect of the initial disbursement on the regular monthly disbursement would depend on the scheduled term and interest rate.[15]

Simulations: Non-term Loans

In the discussion of the lender's ROR on a term reverse mortgage, we pointed out that the minimum ROR was the interest rate since it was assumed that the loan balance would always be fully repaid. With a non-term instrument this might not be the case since the loan balance could grow beyond the property value. If this occurs, the amount repaid will be less than the loan balance and the ROR will fall below the posted interest rate. Thus with a non-term reverse mortgage loan the amount of appreciation in property value can be critical. (We will assume throughout that the lender's recovery is limited to property value.) We will look first at non-term loans without shared appreciation and then analyze the effects of shared appreciation. Note, however, that IRMA is the only type of non-term reverse mortgage currently being offered. The other types of non-term loans discussed are prototype reverse mortgages.

A non-term reverse mortgage is repaid when any one of a set of contingent events occurs. The most frequent events triggering repayment are a move out of the home (usually the result of ill health) and death. But to describe a reverse mortgage instrument simply as non-term is not sufficient. A reverse mortgage without a scheduled date of repayment may have either a limited or unlimited period of disbursements. Whether the monthly disbursements to the homeowner are contingent upon occupancy or are otherwise limited will affect the attractiveness of the instrument to homeowners as well as to the lender (whose focus is on the ROR).

Suppose a reverse mortgage is written without a term for repayment but with the same periods and amounts of disbursement and interest rates as in Table 1. That is, disbursements are calculated using the same target LTV and property value at origination.

Table 4

Rate of Return to Lender on Non-Term Reverse Mortgage with Limited Period of Disbursements

Interest Rate = 12 percent

Actual Term (Years)	Scheduled Term in Years*								
	5	9	13	5	9	13	5	9	13
	Appreciation = 1%			Appreciation = 3%			Appreciation = 5%		
5	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%
9	9.5	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
13	6.3	10.6	12.0	8.7	12.0	12.0	11.1	12.0	12.0
17	4.9	7.7	11.3	7.2	10.3	12.0	9.4	12.0	12.0

*The scheduled term is the basis for the determination of disbursements and the time period over which disbursements are made. Thus, a nine-year scheduled term would have disbursements for nine years, and if occupancy extended beyond that point, disbursements would cease. The target loan balance is 80 percent of property value at loan origination.

Table 5

Rate of Return to Lender on Non-Term Reverse Mortgage with Unlimited Period of Disbursements

Interest Rate = 12 percent

Actual Term (Years)	Shadow Term in Years*								
	5	9	13	5	9	13	5	9	13
	Appreciation = 1%			Appreciation = 3%			Appreciation = 5%		
5	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%
9	0.9	12.0	12.0	4.7	12.0	12.0	8.2	12.0	12.0
13	−4.6	8.1	12.0	−0.5	11.4	12.0	3.3	12.0	12.0
17	−6.6	3.9	10.3	−2.2	7.3	12.0	1.7	10.4	12.0

***The shadow term is the basis for the determination of disbursements. Thus, a nine-year shadow term would have disbursements based on nine years of disbursements before the target loan balance is reached. In fact, disbursements continue for the actual term. The target loan balance is 80 percent of property value at loan origination.**

The target loan balance is the loan balance at the point disbursements end. If such a loan were repaid before the "disbursement term," the ROR clearly would be the interest rate. But if loan repayment were to occur after the end of disbursement, the loan balance would continue to accrue interest and could grow beyond the property value. The lower the rate of property appreciation, the more likely this would be to occur. The ROR to the lender will fall below the interest rate if occupancy is long and property appreciation is small. Some examples are shown in Table 4. In this example, disbursements cease after nine years even if the homeowner remains in the home. A single interest rate (12 percent) is used in the table to emphasize the effects of property appreciation and term of occupancy.

A second type of non-term instrument would continue disbursements as long as the homeowner remained an occupant in the home. In this case the lender could earn a negative ROR since the total sum disbursed could ultimately exceed the property value.[16]

If neither occupancy nor disbursement is limited, the concept of a scheduled term is meaningless. Instead, the lender should think in terms of a "shadow term," an expected term that can be used to determine disbursements. Whereas the scheduled term is the date at which the loan balance would hit the target amount, the shadow term is a date by which the loan would be expected to be repaid. Since the size of the monthly disbursement is determined by the expected term, the lender would base the disbursements on the expected term of tenure in the home. Since tenure can be at least roughly correlated with age, a shadow term based on expected tenure would result in age-related disbursements. We will return to this point shortly.

Table 5 displays RORs for reverse mortgages with unlimited periods of disbursement. Not surprisingly, continuing disbursements have the effect of dampening RORs relative to those shown in Table 4.

In our examples, as one moves to the more risky type of reverse mortgages, the ROR falls because of three factors: the reverse mortgage interest rate is being held constant; the relationship between expected occupancy and the term used to calculate disbursements is ignored; and all of the risk is one-sided. The expected ROR can be increased by altering these factors.

The easiest adjustment is to simply charge a higher interest rate on riskier loans. Thus, a simple term reverse mortgage might carry a 12 percent interest rate. A reverse mortgage that defers repayment for as long as the home remains a principal residence, but makes disbursements for a fixed term, might carry a rate of 12.5 percent. And a reverse mortgage that both defers repayment and continues disbursements until the home is no longer a principal residence might carry a rate of 13 percent. A lender could compare the expected ROR under different instruments and choose interest that would result in the same expected ROR or could opt for a higher ROR on the riskier instruments so as to incorporate a risk premium.[17]

Of greater importance than the interest rate is the fact that a reverse mortgage borrower with disbursements calculated on a five-year basis might remain in the home for 17 years. Thus with non-term instruments, and especially those without a set term of disbursements, lenders would want to tie the size of the disbursement (or the number of years used to calculate the size of the disbursement) to the expected term of tenure in the home. The easiest way to do this would be to relate the disbursement to the age of the borrower. In that situation, the likelihood of a five-year-based disbursement continuing for 17 years would be small, the expected rate of return on a pool of loans would be close to the interest rate used to book interest on the loans, and the variance from that expected ROR would be small.

The third factor noted above was that the ROR falls because all of the risk is one-sided. If the property fails to appreciate and the borrower remains in the home for a long time, the ROR falls. If the property appreciates or the tenure in the home is short, the lender simply takes the posted interest (12 percent in tables 4 and 5) as the ROR. Thus, all the risk is downside risk, but it need not be. Consider, for example, IRMA.

The IRMA offsets the risk of lengthy occupancy by sharing in appreciation (as well as by having age-related disbursements). By sharing appreciation the possibility of a low ROR is balanced by the possibility of a high ROR. Moreover, a sharing in appreciation generates a particularly high ROR if the actual loan term is short.[18] If actual maturities are likely to be short, then a sharing of appreciation may well make the risky situation one with a greater-than-normal expected ROR.

In sum, lending with a non-term reverse mortgage entails risk, particularly the risk associated with the actual term of tenure. Whether or not disbursements are continued for the period of occupancy, there is a downside collateral risk. However, risk can be ameliorated through careful underwriting and the use of age-determined disbursement schedules. The risk can also be diminished by introducing shared appreciation or by charging a higher interest rate for short-term loans. By opening up the possibility of higher than-expected RORs, a lender can pool the risks, which in turn means both a more certain as well as satisfactory ROR.

Sale Leasebacks

Unlike a reverse mortgage, a sale leaseback generates a cash flow to the older homeowner through the sale of the residence. An investor (either an individual or a group) purchases the property and leases it back to the same person or couple. Thus two flows of funds are involved with a sale leaseback: the flow of funds associated with the purchase (from the investor to the homeowner) and the flow of funds as rent (from the tenant to the investor). The rental flow is straightforward whereas the purchase-related flow depends on arrangements reached between the parties.

Sale leaseback plans differ greatly in the treatment of the purchase proceeds.[19] In some plans the investor pays a down payment in cash and the seller takes back the investor's note for the remainder of the purchase price. This means that buyer and seller must agree on the percentage of the purchase price to be financed and on the loan terms (the note maturity and interest rate). The seller in this type of arrangement would receive a monthly payment from the investor net of rent. However, the gross payments on the note would terminate upon maturity of the note. If nothing is done in anticipation of this, the seller would henceforth have no more income from the sale of the house. Consequently, the seller may either be encouraged or required (depending on the plan) to purchase a deferred annuity at the closing of the transaction. The annuity would begin its flow of payments upon maturity of the note. Therefore, whether or not the seller remained in the home, a flow of income would continue for life.[20]

A different type of sale leaseback would have the investor purchase the property with cash or with funds received from a loan (the terms of which would not affect the elderly homeowner directly, but would be a matter between the investor and the lender). It would then be up to the seller to put the proceeds of the sale into an income-generating form, preferably a single-premium annuity purchased at the time the transaction closed. The characteristics of the annuity (existence of guarantees, variable vs fixed payments, etc.) would be negotiated between the annuity provider and the elderly homeowner.

The treatment of the purchase proceeds can give rise to vastly different income flows. In addition, the purchase agreement itself may influence the purchase price. For example, if the seller is willing to take back the note of the investor and is willing to accept a below-market rate of interest on the note, the investor might be willing to pay more for property than if the purchase were financed through an institutional lender.

Three factors other than the purchase price will affect the size of the income flow. First, the more institutional parties to the transaction (brokers, lenders, insurance companies) the smaller will be the net income to the seller and/or the return to the investor. Second, if an annuity is included in the transaction, the age, perhaps the sex, and the marital status of the borrower will affect the income flow. If no annuity is included, the seller and investor may wish to recognize life expectancy in the terms of their transaction (such as in the duration of the investor's note), but this is likely to be done casually. Third, a sale leaseback involves a transfer of title, and with it some of the burdens and benefits of ownership. The transfer of the benefit of appreciation and of certain tax advantages to the investor should result in a net income flow to the seller which exceeds the net income flow from a non-appreciation-sharing reverse mortgage. Consequently, the investor's view of the likelihood of appreciation and the tax consequences of the investment will ultimately determine the net income flow to the seller.

Risks and Uncertainty Associated with Reverse Mortgage Lending

Any financial instrument involves risk and uncertainty. The nature of the risk differs across instruments and according to the specific parameters of the instruments. For instance, the risk on a shared-appreciation reverse mortgage is quite different from that on a term reverse mortgage.

In this section we will concentrate our attention on the risks associated with reverse mortgages. Sale leasebacks involve similar risks, but a lender's involvement with these risks is likely to be minimal. For reverse mortgages, the lender's involvement is integral to the transaction.

Lender Risks with Reverse Mortgage Loans

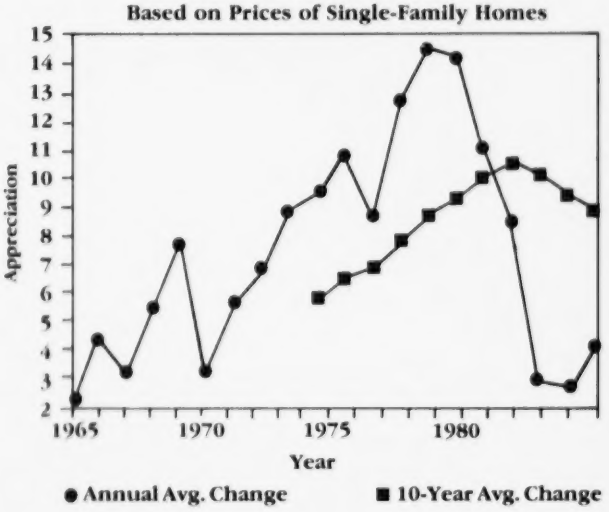
Reverse mortgage lending is, in many ways, similar to forward mortgage lending. A loan is made against a residential property, and many of the practices associated with forward loan origination remain unchanged. However, reverse mortgages entail some risks that are different and some that take on new significance. Moreover, reverse mortgages also entail risks to the borrower, and the perception of these risks will affect the receptivity of elderly homeowners to reverse mortgages.

The major risk to the lender is that of default of full repayment by virtue of a loan balance exceeding the property value. This type of risk is present with a fixed-term reverse mortgage, a non-term/non-appreciation-sharing reverse mortgage, and an appreciation sharing reverse mortgage. The magnitude of the risk is affected by the rate at which the loan balance increases and the expected duration of the loan.

The more quickly a loan balance rises the greater the default risk. One reason for this is that over a short period of time the likelihood that a given property will appreciate is subject to variance. Over longer periods of time, year-to-year fluctuations in property values are smoothed out. The history of property value changes in the post-World War II period is one of considerable year-to-year variation with a strong trend of appreciation overall. Figure 2 shows the year-to-year price changes and the average changes for ten-year periods for all new houses in the United States. Note that the ten-year average changes have moved gradually from a low in 1974 of 5.4 percent to a 1984 figure of 8.8 percent, whereas the year-to-year changes have varied from a low of two percent to a high of almost 15 percent.

Figure 2

CHANGE IN U.S. NEW HOUSE PRICES
Based on Prices of Single-Family Homes



Calculated from Price Index of Existing Housing, U.S. Department of Commerce

Note: Data are available from 1963 to the present on the prices of new one-family homes with comparable features. This price index is intended to reflect price changes of a specific new structure over the past twenty years. Most price data on houses reflect actual sales, which fails to distinguish changes in the type of housing being built and sold from changes in the prices. By comparing equivalent houses over the years, the price index focuses on changing prices.

There is another reason beside property value fluctuations that a loan balance that reaches the target LTV quickly creates a higher default risk than one that increases more slowly. Once a loan balance becomes fairly large, it is more affected by accumulating interest than by additional disbursements. This means that a reverse mortgage that defers repayment for the term of tenure but limits disbursements to a fixed term could be just as risky as a reverse mortgage that defers repayment and continues disbursements for the term of tenure. If the loan with limited disbursements rises to its target balance quickly, the potential future interest accumulation will be large. Once the target balance is reached, interest on the amount will be the same whether it took five, ten, or 15 years to get there.

In addition to default risk, a second type of lender risk is interest-rate risk. Interest-rate risk is greater with a reverse mortgage than a forward mortgage because the reverse mortgage involves a promised future disbursement of funds. For fixed-rate reverse mortgages, future rates will be made at the interest rate prevailing at origination. Thus, there is the common interest-rate risk of funding a long-term loan with short-term funds, as well as the additional risk of tomorrow's loans being made at today's rates. This risk can be ameliorated with an adjustable-rate reverse mortgage, with adjustments to the debit rate for the full loan balance.

If the interest rate on a reverse mortgage is subject to change, this means that the future course of the loan balance is uncertain. Disbursements could be adjusted to keep the future loan balance on the original track, but this would be an unattractive feature for the homeowner.

Over time, as the loan balance grows, a given change in the interest rate will affect the loan balance slightly more than early in the life of the loan. For example, an increase in the reverse mortgage rate from 11 percent to 12 percent in the tenth year of a loan will increase the loan balance by more than it would in the second year, although the effect is relatively small in either case. Of course, the cumulative effect of a sustained rate change will be greater. A disbursement of $400 per month at 11 percent interest for ten years accumulates to $87,595, whereas at 12 percent it accumulates to $92,936.

The risks to the lender of interest rate changes and default due to the loan balance exceeding property value are related. When interest rates rise over a sustained period of time, it is usually associated with a change in expected inflation. Periods of high interest rates in this and other countries are typically periods of high expected inflation (and high current inflation as well). Inflationary expectations affect real estate prices as much or more than any other commodity. Consequently, periods of high interest rates (which are risky to the lender) are likely to be associated with periods of rising property values (which entail lower risk to the lender). This negative correlation between these two lender risks is beneficial.[21]

A third (and final) lender risk is the risk of long-term occupancy. Not much information is available on the occupancy patterns of reverse mortgage borrowers. However, we would expect such occupancy patterns to differ from those of other older homeowners because of the special characteristics of reverse mortgage borrowers. The evidence to date primarily reflects the first year or two of operation of a few reverse mortgage programs or plans, and it is much too early to tell whether long-term tenancy poses a significant risk to lenders.

On the other hand, all providers of reverse mortgage loans agree that they see a tendency to early payoff. The number of reverse mortgages paid off in the first few years has been larger than they expected. This is true of both term and non-term loans.

Whether or not many early payoffs will continue to occur remains to be seen. Clearly, however, the greater the number of borrowers that pay off early, the fewer there are to go long. It appears that the short end of the loan pool may well dominate, creating a short weighted-average loan life for the pool.

Borrower Risks with Reverse Mortgage Loans

From the borrower's perspective one of the chief risks is that the lender might default. Obviously, a lender default could have serious consequences to an elderly homeowner. Since a reverse mortgage agreement may be the most important financial agreement the borrower has ever entered into, lenders should expect homeowners to exercise great caution and should even expect a certain amount of trepidation.

An equally serious possibility for some homeowners is depletion of their equity. Some homeowners have little concern for their final equity position and are happy to give up their equity in exchange for a secure promise of life tenancy and life income. Other elderly homeowners want to be able to leave some fraction of equity or a specific amount of money to their children or other beneficiaries. For the latter group, the possibility of complete depletion of equity is a serious risk. As we noted at the outset, home equity of the elderly is not only significant in the aggregate, it is also the single most valuable asset for most elderly homeowners. Thus total equity depletion would represent virtually total depletion of assets for many homeowners.

An additional related risk applies specifically to reverse mortgages with a fixed term of disbursements. The most significant risk here is that borrowers may outlive the disbursement term. In this case, equity depletion means the end of the income stream and possibly the end of occupancy. The significance of this risk depends on the age and health of the borrower. The risk, or the perception of risk, probably would be trivial to an 86 year-old with a terminal disease, but substantial to a healthy 70 year-old.

Reviewing these risks to homeowners clarifies two points. First, the same HEC, or even the same reverse mortgage, instrument will not suit all borrowers. Any particular plan will only appeal to a segment of the potential HEC market. Second, the marketing of HEC instruments is a serious matter; marketing materials should be informative and discuss clearly the benefits and drawbacks of any instrument. Confused, uncertain, and worried elderly homeowners will not convert their home equity, nor should they. A successful program of reverse mortgage lending will identify elderly homeowners who can best utilize the instrument and will help inform these potential applicants that home equity conversion may be an attractive option for them. It will also identify those who are ill-suited to the instrument or program, and will not present home equity conversion as a panacea for the elderly.

Benefits of HEC to the Lender and Borrower

We have looked at the major risks of home equity conversion to lenders and borrowers, but have not concluded that the risks outweigh the benefits. Even beyond the benefits and costs from a broad societal perspective, individual lenders and investors, as well as homeowners, can gain from HEC programs. The benefits to be gained from HEC involvement will be briefly reviewed. Again, because the role of the lender is more complex in a reverse mortgage situation than in a sale leaseback, we will concentrate on the reverse mortgage.

Lender Benefits from Reverse Mortgage Lending

Reverse mortgage lending offers lenders a way of promoting community stability, gaining favorable publicity, and improving profitability.

Reverse mortgages enable elderly homeowners to remain in their own homes longer than would otherwise be possible, and provide them with sufficient funds to maintain their homes. A study of the California RAM program found that the participants often used the reverse mortgage as a source of income when their expenses (especially medical expenses) were outpacing their incomes. When applicants to the RAM program were asked how they would use the additional income, the most frequent responses were to pay for medical expenses and to pay for needed home repairs.

Home maintenance and repair not only enhances a community's appearance, but can affect its stability. Indeed, some nonprofit HEC programs have come into existence explicitly to foster home and neighborhood improvement. For a lender with a large presence in a community, such a use of funds might be viewed as a praiseworthy investment in the community itself.

Reverse mortgage loan programs tend to receive substantial favorable media coverage. For a depository institution with a focus on expanding its deposit base, this can be especially valuable. Additionally, regulators tend to view this kind of lending favorably which in turn can lead to favorable Community Reinvestment Act treatment.

Lastly, let us emphasize that reverse mortgage lending can be profitable in itself and should not be viewed as just a public relations gambit. The profitability of such a program will depend on the development of a comprehensive marketing program and well-designed reverse mortgage instruments.

Borrower Benefits from Reverse Mortgages

The benefits to borrowers from HEC, and reverse mortgages in particular, are many: Besides enabling elderly homeowners to remain in their own homes for a prolonged period, HEC provides a regular income which gives them access to desired goods and services; an ability to avoid having to rely on government social programs, and improved health care. HEC may also serve as a bridge from individual to community living, especially where access to such institutions as congregate housing or continuing care facilities is limited and long waiting lists exist.

The Future of Reverse Mortgage Lending

To some degree the future of reverse mortgage lending depends on the receptivity of lenders to HEC. If many lenders become actively involved in this type of lending, it will become more familiar to homeowners and better instruments will evolve. A larger base of lending will also bring economies of scale into play, both for the individual lender and the industry as a whole. A large volume of reverse mortgages would prompt those intermediaries that purchase financial paper to consider the purchase of reverse mortgages. But other factors that are independent of the actions of individual lenders will also affect the ease, desirability, and profitability of reverse mortgage lending.

Potential reverse mortgage lenders are limited in the types of instruments they can offer. Nowhere is this more true than in the area of annuity-type instruments. For example, a depository intermediary cannot easily write an insured loan. Such a lender may be able to write a loan that has some of the characteristics of an insured loan (and it may be profitable to do so), but it cannot overtly insure a loan. At the same time, insurance to cover the risks to the lender connected with reverse mortgage lending is unavailable. If insurance were made available either to insure the continued flow of income to the homeowner or to insure the lender against default (these two types of insurance in effect come down to the same thing), it would enhance the offering of non-term reverse mortgages. Reverse mortgage insurance could conceivably come from three sources: government agencies, life insurers, or mortgage guarantee insurers.

A second factor affecting the desirability of writing reverse mortgages is the lack of a secondary market for the loans. At present, there are two obstacles to the development of such a market. The first is size. The number of reverse mortgages that have been originated in any single program is not large enough to entice the large investors in the secondary market. The second obstacle is the lack of standardization of instruments and the lack of security that could provide a safe and simple way of investing in a reverse mortgage instrument. If reverse mortgages are to be sold on the secondary market, they will have to be sold in such a way that the investor does not experience a substantial administrative cost (which in effect would be servicing the loans), and in such a way as to guarantee the investor a minimum rate of return.

A related enhancement would be the ability to originate reverse mortgages on behalf of another party. Investors may be willing to pledge funds for the origination of reverse mortgages (rather than purchasing already originated reverse mortgages). This would put the financial institution that is closest to the homeowner in the role of a servicer of loans. This would appeal not only to many depository intermediaries, but it would bring a new set of lenders—mortgage bankers—into the market.[22]

The government is playing a major role in the development of HEC plans. Part of this role is carried out in the regulatory functions of federal and state agencies. Lenders and investors can be encouraged or discouraged from participating in HEC programs as a result of the regulatory climate. Equally, if not more important, however, will be the influence of other government policies on HEC. For example, the determination of how HEC income affects an elderly homeowner's eligibility for public assistance (e.g., SSI, medicaid, food stamps, and energy assistance) could largely determine the viability of HEC for many.

Home equity conversion instruments presented in this publication are independent products. The HEC plans that have been offered in the U.S. to date have been primarily of this single-identity type. But the future development of HEC plans could well include joint products with health care or home maintenance services. One example of a joint product is the HELP program which provides regular home maintenance and repair of the residence, as well as a monthly payment. Thus, program participants receive both a steady cash flow and a home security program. Such joint service provision could also extend to medical services or medical insurance. The most promising linkage might be between long-term care insurance and HEC.

Finally, the successful development of an HEC program in a given community may depend on the existence of a counseling/referral program for the elderly. HEC instruments are both little-known and little understood as yet by elderly homeowners and their representatives (families, attorneys, or financial advisors). An effective way of breaking the barrier of skepticism may be through independent or third-party counseling. An independent HEC counseling program would make a lender's entry into HEC lending far easier.

In sum, home equity conversion instruments such as reverse mortgages and sale leasebacks are offered as the result of a decision on the part of a lender, investor, or consortium. However, the success of such a program in terms of the number and quality of the transactions will depend not only on the efforts of these providers, but on factors beyond their immediate control. We believe that as a result of the demographic profile of this country (i.e. the increasing number of elderly homeowners who could benefit from HEC) that HECs will become widely available. The speed with which this occurs will depend both on the actions of financial institutions and on the outside influences we have discussed.

NOTES

[1]**Federal Reserve Bulletin,** September 1984, p. 683.

[2]**Federal Reserve Bulletin,** December 1984, p. 859.

[3]**US Bureau of the Census,** 1980 Census of Housing. Vol. 5, **Residential Finance** 1983, p. 74.

[4]Outside the United States, the one HEC instrument with a longer history is the *Vente en Viager* of France. (Although sometimes called a *Rente Viager*, the latter term properly refers only to the "annuity" repayment component of the sale.) The split-equity sale is a procedure that is well established in French law and practice. The equity that is sold need not be a house, although the sale of a house in this type of transaction is common. The sale can be within families or with an outside party as investor.

[5]In the first two months of the program (1985-86), the interest rate was eight %.

[6]If the instrument were not a term loan, the "final" loan balance would be unknown. Calculating payments (level or otherwise) would require one to use an expected maturity date.

[7]When analyzing HEC instruments, the concept of "the homeowner" can become cloudy. It matters greatly whether one is talking about single or multiple homeowners, and how title to the property is held. Depending on the personal needs of multiple homeowners, or even married homeowners with a property held in the name of one of them, the HEC instrument may be tied to one person or to both. Throughout this presentation the homeowner is assumed to be a single individual. However, this is merely an editorial simplification and should not be taken to mean or imply that HEC is only for single homeowners.

[8]In the case of sale leasebacks the critical factors are whether an annuity is purchased, and, if so, whether it is immediate or deferred.

[9]In many contracts and in the law of some states, HEC loans are nonrecourse loans. The holder of a nonrecourse loan is limited in recovery to the property that has been mortgaged. For simplicity, we will assume that the loans being discussed are nonrecourse loans. Because most elderly homeowners who engage in HEC have few other assets, this assumption is also realistic.

[10]The actual payoff date for a reverse mortgage is unlikely to be the precise maturity date of the loan. Many reverse mortgages will be paid off early (as a result of illness, a move from the home, a change of mind, or death). Those reverse mortgages that go to term will presumably be paid off using the proceeds of a sale. Even then the sale will probably not close on the exact date of the reverse mortgage maturity. Thus, payoff will rarely be at maturity.

[11]This is the maximum LTV according to program guidelines in the SFDF RAM program.

[12]In our simulations, we will discuss an instrument with a term for disbursements but not for occupancy. In the present discussion, the use of the term concept applies to both disbursements and occupancy.

Note that even a "non-term" instrument can be written with a maturity date, in order to make the instrument truly be a loan and not an annuity. The length of the maturity would have to be sufficiently great so as to have no significance to the borrower. For example, a 30-year maturity for loan made to an 80-year-old would not be a serious restriction.

[13]These contingent events would be specified in the loan agreement as default provisions which would trigger a demand for loan repayment. It should be noted that the Garn-St. Germain Depository Institutions Act of 1982 specifically permits the enforcement of a "due on sale clause" in a reverse mortgage. However, states were permitted to override this act within three years of passage and some states did so.

[14]All rates of return calculated in our examples are internal rates of return on the funds loaned. If the lender borrows these same funds at a lower (cost of funds), then the ROR would be still higher.

[15]Think of the initial disbursement as a reduction in the target loan balance that can be used to determine monthly disbursements. The effect of a $5,000 initial disbursement on a 12 percent/eight-year reverse mortgage is to "reduce" the target loan balance used to determine disbursements by $13,000 ($5,000 plus interest). Obviously, there is a limit to how large an initial disbursement can be before it consumes the entire final loan balance, or reduces the monthly disbursements to a trivial amount.

[16]Technically, a negative ROR could also result in the previous example where disbursements were limited if the property depreciated sufficiently.

[17]Note that a higher interest rate also means a smaller disbursement, other factors held constant.

[18] See K. Scholen, M. Weinrobe, and W. Perkins, "A Financial Guide to the Century Plan," 3rd edition (Madison, Wis.). National Center for Home Equity Conversion, 1984).

[19]All sale leasebacks involve a takeover by the investor of major maintenance expenses, property taxes, and property insurance. They also include some type of lease to protect the tenant against future substantial rent increases. And regardless of the specific plan, the purchase price and rent are determined by appraisal. There is a difference, however, across plans as to whether any discount from appraised value is used in calculating a suggested purchase price.

[20]The flow of income from the note also depends on the investor not prepaying the note. This is an important consideration since it would be impractical to tie the hands of the investor by prohibiting a resale of the property, yet a resale could well result in prepayment of the note.

[21]The potential for offsetting risks can be summarized as follows. To the extent that changes in home values are part of a generally expected inflation, they are likely to be accompanied by interest rate changes in the same direction. To the extent that changes in home values reflect changes in the supply of or demand for housing or land, they will not be accompanied by interest rate changes. Because the major influence on nominal interest rates is expected inflation, permanent interest rate changes are likely to be accompanied by changes in home values in the same direction.

[22]Technically, American Homestead, the developer of IRMA, does business as a mortgage banker. Nevertheless, traditional mortgage bankers have not yet become involved in reverse mortgages or sale leasebacks.

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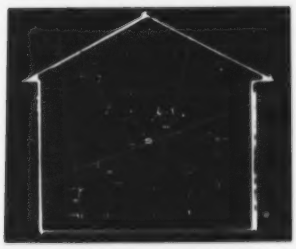

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